Policy for the Management of Technology Projects

PURPOSE

To set forth a policy for defining technology projects and assigning project management responsibilities. This policy is established in recognition of the fact that:

1. Certain projects, by nature of their size, complexity, mission criticality, and other factors should be monitored through a shared relationship between the proponent agency(s) and the Division of the State CIO's Project Management Office.

2. Regardless of project size, complexity, mission criticality, or other relevant project attributes, sound project management practices add value that benefits the project and the organization; and,

3. Research shows that projects are more likely to succeed if organizations consistently apply generally-accepted project management principles.

DEFINITIONS

1. Project – a temporary endeavor undertaken to create a new or unique product or service. Major revisions or modifications to existing technology systems or resources may also be deemed to be a project.

2. Project Management – a discipline that involves people applying appropriate processes to meet business/program goals within time, costs, technical and quality requirements.

3. Project Plan – a formal, approved document used to guide both project execution and project control. The primary uses of the project plan are to document planning assumptions and decisions, facilitate communication among stakeholders, and document approved scope, cost, and schedule baselines. A project plan may be summary or detailed.

4. Cumulative Investment in Technology – the total estimated costs (i.e., human resources, supplies, equipment, administrative, operational, contractual, etc.) including "hard" and "soft" dollars that will be incurred by an agency(s) to implement a project from initiation to closure. For the purposes of this Policy, it does not include maintenance or ongoing operational costs that would be incurred after project closure.

5. Project Sponsor - The project sponsor is a senior executive in the proponent agency who is responsible for the strategic direction of a project. The sponsor must have the authority to define project goals, secure resources, and resolve organizational and priority conflicts. For enterprise and multi-agency projects, there may be multiple sponsors.

6. Enterprise Project – is a project that involves the implementation of a technology application, system or service that will be used by, or will impact, a large majority, if not all, of the state agencies.

7. Multi-agency Project – is a project that involves the implementation of a technology application, system or services by a small "cluster" of agencies that will share in the costs and/or the benefits of the technology. It does not include a contract between agencies where one agency is providing services to another agency.

8. Independent Verification and Validation Contractor - is a contractor hired to verify that project efforts conform to and are being conducted in accordance with an approved project plan, that the product(s) of each phase of the project meets requirements, and as the project progresses toward closure, that all deliverables meet the overall project objectives of schedule, scope, quality and costs.

SCOPE

This policy applies to agency projects, multi-agency projects and enterprise projects having a cumulative investment in technology of $50,000 or more. While smaller projects are not specifically addressed by this Policy, it is recommended that all sizes and types of projects be managed in a consistent manner, using the methodology prescribed herein. In addition, agencies seeking certification to independently manage Major Technology Projects (see description in Section 1.0 below) must have a record of consistently using the prescribed methodology to manage all technology projects.

BACKGROUND

All technology projects having a cumulative investment in technology of $50,000 or greater must be submitted to the Research and Planning Services Office in the Division of the State CIO as part of the IT Planning Process. Such projects will be reviewed to determine technical compliance with the Enterprise Architecture and the financial impact on the agency and the State (see below). The level of detail that an agency is required to submit in support of a project has been "tailored" according to the cost, complexity and importance of the project.

IT Planning Process

Agencies are required to develop Information Technology Plans and submit those plans each year by October 31st, for the upcoming fiscal year, to the Research and Planning Services Office in the Division of the State CIO for review and evaluation. These plans are to include a listing of all technology activities including operations and any new projects having a cumulative cost in excess of $50,000. The Research and Planning Services Office will complete its evaluation of these plans by early January and return the results to the submitting agencies. Also, at that time, an Information Technology Planning Report is produced and presented to the House Ways and Means and Senate Finance Committees. The Planning

Report presents general statistical information about the status of IT planning in state government and consists of a textual presentation of the new IT applications being planned for the coming fiscal year and a graphical presentation of the State's base operating budget for information technology.

Architecture Compliance

The Architecture Support Group in the Division of the State CIO shall review proposed IT projects for compliance with established Enterprise Architecture standards to maximize opportunities for migration from the current architecture to the desired future architecture. Agencies can facilitate architecture review of technology projects by indicating compliance with existing standards or by requesting an exception to such standards, as appropriate. Agencies can determine compliance with the Enterprise Architecture or request exceptions to approved standards by using forms located at www.cio.sc.gov/SCEA/ITEA2.pdf. Once the project is approved, major deviations in the specified technology must be resubmitted to the Architecture Support Group for review and evaluation.

Business Case Review

Proposed technology projects submitted to Research and Planning Services must be supported by a business case study. This business case study for all proposed Major, Multi-agency and Enterprise Technology Projects (see Section 1.0 below) must be completed using the State's Business Case Methodology. The study must document how the proposed project will produce greater efficiencies in agency processes, provide better services to agency clientele and/or citizens, or result in a substantial return on investment to the agency. The study must also indicate the source of the funding for the project. Forms and instructions for completing the business case study can be found in the Business Case Template section of the CIO Web site. The business case for all proposed Major, Multi-agency and Enterprise Technology Projects will be reviewed and evaluated by a panel representing the financial interests and organizations of the state.

Once a project is evaluated and approved through these processes, it will be administered and managed in accordance with the policy set forth below.

POLICY

1.0 General

Agencies shall utilize an approved project management methodology for all technology projects that have a cumulative investment in technology of $50,000 or greater. Agencies shall utilize the project management methodology published by the Project Management Office (PMO) in the Division of the State CIO or request an exception to use a methodology of their choosing that applies generally-accepted project management principles throughout the project's life cycle (see Section 7.0 below). The agency must have the ability to "scale" the project management methodology according to the complexity and importance of the project.

Technology projects of long duration, more than twelve months, must be executed in phases with incremental objectives and measures of success, such that continued funding can be allocated based on achievements of prior phase objectives.

There are four categories of technology projects in the South Carolina State government with each having different administrative and management requirements. The four categories are:

- Minor Technology Projects (less than $50,000)
- Small Technology Projects
- Major Technology Projects
- Multi-agency and Enterprise Technology Projects

When a project is submitted to the Research and Planning Services Office in the Division of the State CIO, it will be evaluated using the criteria set forth below to determine if it should be categorized as a Small Technology Project or a Major Technology Project. Generally, if a project meets two or more of these criteria, it will be considered a Major Technology Project:

- The estimated cumulative cost of the project exceeds $400,000,
- The project is mission critical to the agency and/or the State,
- The expected duration of the project exceeds twenty-four months,
- The project is considered a high risk for success (i.e., the project involves leading edge technology, there is no qualified project manager to oversee project, etc.), or
- The project has enterprise or multi-agency implications.

Any project having a cumulative investment in technology of $1,000,000 or more will be considered a Major Technology Project. This is unless the agency submitting/conducting the project has received certification to independently manage projects up to a cumulative investment in technology of $5,000,000 as set forth in Section 6.0 below.

If the agency disagrees with the categorization of a project by the Research and Planning Services Office, it may request a peer review by the Project Management Advisory Committee. The decision of this Advisory Committee shall be final.

The proponent agency(s) must designate a Project Sponsor for all technology projects. The Project Sponsor shall have the authority to define the project goals, secure resources, approve project budgets and expenditures, and resolve organizational and priority conflicts.

All Major, Multi-agency and Enterprise Technology Projects must have a designated project manager. The project manager may be provided by the agency, another agency, the PMO or by a contractor, at the agency's discretion, and must be assigned to the project from initiation to closeout. Project managers for such projects shall be responsible for reporting project progress to the PMO via the "Project Status Reporting

Dashboard" process set forth below. Beginning on July 1, 2005, if a project manger is assigned by an agency to manage a Major, Multi-agency or Enterprise Technology Project, he or she must be certified as a project manager through a program approved by the PMO, and either conducted by the PMO or by a contractor approved by the PMO (see Section 8.0 below).

For Minor and Small Technology Projects, the application of project management standards, guidelines and oversight will be performed by the agency and should be "tailored" to the size, type and importance of the project.

The PMO may also provide project management staff and/or services on a fee basis for any technology project, upon request by an agency.

2.0 Major Technology Projects

Major Technology Projects will be subject to periodic review by the PMO and will be included in the "Project Status Reporting Dashboard" process set forth in Section 4.0 below.

3.0 Multi-Agency and Enterprise Technology Projects

The PMO shall provide oversight and either provide or approve the project manager(s) assigned to support Multi-agency and Enterprise Technology Projects. Funding for such project management services shall be included in the budget for such projects.

For a Multi-agency or Enterprise Technology Project, the PMO may require that an Oversight Committee be established. Membership on the Oversight Committee shall be coordinated by the State CIO in concert with the proponent agencies. The Oversight Committee will work closely with the PMO to provide direction for the project. The proponent agency(s) will be asked to provide the Chair for the Oversight Committee.

Multi-agency and Enterprise Technology Projects will be subject to periodic review by the PMO and will be included in the "Project Status Reporting Dashboard" process.

4.0 Project Status Reporting Dashboard

The Status Reporting Dashboard provides a succinct framework for reviewing, monitoring and assessing the status of Major, Multi-agency and Enterprise Technology Projects. It provides a mechanism for project managers to electronically submit high-level information to the PMO about the status of such projects in a common and consistent format. Such information includes widely used project management metrics such as Schedule Performance Index (SPI) and Cost Performance Index (CPI). These metrics are examined by and compared to key indicators by the PMO. Using color codes, the PMO will then publish a summary to stakeholders of the status of active Major, Multi-agency and Enterprise Technology Projects.

5.0 Projects at Risk

Projects at risk are defined as projects that have failed to meet agreed upon expectations set forth in the project plan over several reporting periods (e.g. received a Dashboard color code of red), and where no significant action has been implemented to correct such problems. These may be problems attributed to cost, schedule and/or scope overruns; unrealistic demands or constraints; or internal or external management processes and procedures. The PMO advocates a fundamental approach to identifying and managing projects at risk which draws on models from risk management. The processes required to manage such projects are to identify, assess, respond and control.

As such, the PMO may, on its own or upon request by the agency, take any or all of the actions listed below to address/resolve problems experienced by a project at risk. The State CIO and the executive management of the agency must be notified of all such actions, and the agency must promptly comply with such requests from the PMO. If the agency disagrees with the findings of the PMO, it may at any point in the process request a review by the Project Management Advisory Committee, composed of project management professionals from other state agencies.

First, a representative from the PMO and the project manager of the "troubled project" will jointly review the project status seeking to identify the issue(s) that have jeopardized the project. This preliminary assessment will be followed by a discussion of the options available to mitigate the problem(s), including the need to conduct an audit.

Second, the representative of the PMO and the project manager will determine, based upon the size and complexity of the project, if a formal assessment (either a formal or informal audit) of the project is required. The scope of this assessment will be determined by the pattern of missed project milestones, critical project metrics that are out of prescribed ranges and/or other expected causes that are not as easily identified. The focus of the audit will be process assessment, not approval of the project. The findings of the audit will be published to the agency's executive management, the State CIO and other stakeholders identified in the project charter.

If it is determined that the project should be continued, the PMO and the project manager will propose a "rescue" plan to the executive management of the agency and to the State CIO that is a systematic response to the issues identified in the audit of the troubled project. If approved, the PMO will assist the agency in the implementation of the rescue plan. This intervention is based upon the knowledge that it is a significant challenge for the project manager and the agency to keep the project moving forward during its rescue without assistance.

Third, the PMO may also require an agency to use the services of an Independent Verification and Validation (IV&V) contractor on projects that have experienced serious "trouble." Reports from the IV&V contractor will be provided directly to the PMO, State CIO with copies to the agency.

Finally, if it is determined that the project should be terminated, a recommendation will be made to the State CIO and the agency's executive management for their further action. If they concur with this recommendation, all supporting documentation will be forwarded to the legal counsel for the Budget and Control, as well as the legal counsel for the agency, to identify any potential legal/contractual implications and to identify an orderly process for "shutting down" the project. The legal counsel for the agency will provide stakeholders (i.e., contractors, Budget Office, Legislature, etc.) with the details of this process. Any contractual disputes resulting from such action will be resolved in accordance with the dispute resolution procedures set forth in the South Carolina Consolidated Procurement Code.

The agency will be responsible for any costs associated with the actions required under this Section of the Policy.

6.0 Agency Certification

The PMO recognizes that in addition to having experienced, well-trained project management professionals assigned to manage projects, the culture of an agency must recognize, support, and adopt project management as an effective management strategy. To facilitate the development of this culture within an agency, the PMO will develop and administer an agency IT project management certification program through which an agency can achieve various levels of certification to independently manage technology projects. Certification will be based upon factors such as the number of certified project managers in an agency, the consistent use of a project management methodology on all projects, record of projects completed successfully over the previous three years, and findings of financial and procurement audits. Agencies can receive certification to independently manage technology projects having a cumulative cost of up to $5,000,000. Certification will be reviewed periodically by the PMO.

Certification to independently manage technology projects does not relieve an agency of the requirement to submit information to the PMO as part of the Status Reporting Dashboard process as set forth in Section 4.0 above.

7.0 Project Management Methodology

The PMO is responsible for overseeing the development of a project management methodology for use by all state agencies including policies, templates, metrics, dashboards, reporting requirements, glossary of terms, etc. A standard methodology will facilitate cooperation, coordination and sharing of resources among agencies. The methodology

should not be burdensome on the agencies, but should provide the appropriate project performance information needed to oversee the project. Agencies may request an exception in order to use a methodology of their choosing provided it applies generally-accepted project management principles throughout the project life cycle.

The PMO will also review and approve other project management methodologies that are being used by vendors that provide the same or an enhanced level of management information and/or tools. In order to be approved, a methodology must capture the information needed to produce the metrics specified in the state's Project Status Reporting Dashboard.

The project management methodology developed by the PMO will have five phases and be modeled after the Project Management Life Cycle contained in the Project Management Institute's Project Management Body of Knowledge (PMBOK). The five phases are as follows:

- Initiation
- Planning
- Execution
- Control
- Close-out

The project management methodology should be utilized on a consistent basis for all projects that have a technology component regardless of the dollar value of the project. Because every project is different, this methodology will be developed in such a manner that it can be "tailored" to the size, complexity and importance of the project.

A standard project management methodology will be developed and deployed by the PMO by no later than July 1, 2004. Each agency must adopt this project management methodology or have a methodology approved by the PMO in place by no later than July 1, 2005.

8.0 Training and Certification Program

The PMO shall oversee the development of a project management training and certification program for use by all state agencies. This program shall include various levels of project management training (e.g., general training for managers and sponsors). Senior managers and sponsors should be encouraged to attend, but their attendance will be at the discretion of the agencies.

The training for project managers will include an experience requirement. This requirement shall be relative to the specific training being provided. There will also be a means (e.g. a test or exercise) by which to ensure that participants have successfully completed each component of the training.

The PMO shall implement a Project Management Academy for state government with the goal that participants would be working toward a

state project management certification status. This state certification status should be an intermediate step toward obtaining the Project Management Professional (PMP) certification offered by PMI or such other national project management certifications that may be recognized by PMO. State employees that have an approved project management certification (such as PMP) will only be required to participate in training specific to the state to also obtain the state's certification as a project manager. To the extent possible, project management training should be shared across participating agencies in an effort to make it affordable for all agencies.

Often agency project managers must work with third party vendors to meet key project objectives. The PMO recognizes the importance of vendors having a clear understanding of the State's IT project management methodology and any project management requirements that may be specified in state contracts. To promote and support good project management, the PMO shall provide a four-hour orientation on project management requirements in South Carolina State Government to interested contractors and vendors seeking to do business with the State.

9.0 Best Practices

The PMO will serve as a "best practice" center for project management information. It will conduct research and share experiences about project management from across the public sector. "Best practices" will be promulgated through revisions to this policy, the project management methodology, training program, etc. A reference library of "best practice" information and lessons learned will be maintained at the Division of the State CIO's Web site (www.cio.sc.gov).

10.0 Project Management Tools

The PMO will serve as a proponent for selection/development and approval of project management software tools. These tools will be accompanied by the necessary documentation and training, and where appropriate term contracts for the purchase of such tools. These tools will be selected or developed with the advice of agencies and with the approval of the Architecture Oversight Committee.